

Title (en)

Power steering apparatus with electric motor.

Title (de)

Servolenkung mit einem elektrischen Motor.

Title (fr)

Direction assistée comprenant un moteur électrique.

Publication

**EP 0423737 B1 19940601 (EN)**

Application

**EP 90119855 A 19901016**

Priority

- JP 26950889 A 19891016
- JP 26951089 A 19891016

Abstract (en)

[origin: EP0423737A1] A power steering apparatus wherein a heated state of the electric motor is detected without employing any temperature sensor. There are previously stored plural temperature characteristics each representing the relationship between the temperature variation caused per unit time in the electric motor and the load current, which are prepared, for plural motor temperatures or plural differences between the motor temperature and the ambient temperature. A temperature characteristic is selected on the basis of the present predicted motor temperature or the difference between the motor temperature and the ambient temperature. The present load current is detected, and the temperature variation caused per unit time correspondingly to such load current is calculated from the selected temperature characteristic. The unit-time temperature variations thus obtained are integrated with the lapse of time to predict the present motor temperature. Upon rise of the predicted motor temperature beyond a predetermined point, the electric motor is considered to be in a heated state.

IPC 1-7

**B62D 5/04**; B62D 6/00; B62D 107/00

IPC 8 full level

**B62D 5/04** (2006.01); H02H 6/00 (2006.01)

CPC (source: EP US)

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Cited by

EP1306287A3; EP1262391A1; FR2790242A1; US6883636B2; DE19962068B4; FR2804219A1; EP3364512A1

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